

Configuring the EZ-ZONE[®] RUI/Gateway

- 1. This White Paper is not meant to be an exhaustive step-by-step discussion in configuring the RUI/Gateway, for this work has already been done in two other published EZ-ZONE[®] user manuals. For instance, if needing assistance in setting the RUI/Gateway IP (Internet Protocol) address or if you are simply looking for general information pertaining to Modbus[®] TCP as it is used with EZ-ZONE[®] controls point your internet browser to the Watlow website (<u>http://www.watlow.com</u>) and download the EZ-ZONE[®] PM Communications user manual and or the EZ-ZONE[®] RUI/Gateway user manual.
- 2. Prior to looking closer at the RUI/Gateway configuration prompts let's first take a look at the network in use.



* The RUI allows for a maximum entry of 9999 due to the limitations of the 7 segment display. To enter an offset > 9999 EZ-ZONE[®] configurator software must be used.

- 3. Some notables regarding the graphic above. In the steps that follow we are going to focus on four of the prompts shown: a. Modbus[®] Enable (<u>**P1b.E**</u>) b. Gateway *instance* (<u>**9**</u><u>U</u><u>U</u>)
 c. Gateway *enable* (<u>**d**<u>U</u><u>E</u><u>n</u></u>) d. Modbus[®] offset (<u>**P1o**</u><u>F</u>)
- 4. Notice in the graphic in step 2 that the RUI/Gateway has 2 "Com" instances. Com instance 1 will always be Standard Bus and Com instance 2 will always be the user protocol of choice, in this case, Modbus[®] TCP. This protocol when ordered also comes standard with EtherNet/IP[™] (Industrial Protocol) as well. When setting the prompts for Com instance 2 you must first enable Modbus[®] TCP, EtherNet/IP[™] or both. For the purpose of this paper the prompt displayed as <u>PPLE</u> will be set to yes (Modbus[®] TCP enabled). If a step-by-step example is needed to fully configure the RUI/Gateway refer to step one and download the appropriate user manual.
- 5. To implement the network shown in step two the following settings will need to be entered:

Gateway Instance	Enable Gateway Instance	Modbus [®] Offset
<u> </u>	du.En = Yes	<i>P1.0F</i> = 0
9 2555 = 2	du.En = Yes	<i>P</i>7.0<i>F</i> = 5000
9EUJ = 3	du.En = Yes	<u>P7.0</u> F = * 10000
9160 - 32 - 4	<u>du.En</u> = Yes	<u>ГЛ.оF</u> = * 15000

Further explanation of these prompts and their associated enumerated values will follow. * The RUI allows for a maximum entry of 9999 due to the limitations of the 7 segment display. To enter an offset > 9999 EZ-ZONE[®] configurator software must be used.

- 6. After completing the configuration as shown above as well as your Com 1 settings for the Standard Bus side this will complete the RUI/Gateway configuration.
- 7. Note that KEPServerEX is one of many software packages on the market today that include the Modbus[®] TCP driver; this procedure is for KEPServerEX.
- 8. The following screen shots capture a step-by-step procedure to successfully establish Communications between the computer (PC) running KEPServerEX and the EZ-ZONE[®] RUI/Gateway (Com instance 2) over Modbus[®] TCP. Once communications are established over Com instance 2 we will then look further at the KEPServerEX configuration that will enable communications through the RUI/Gateway to Com instance 1 and the EZ-ZONE[®] PM controls (1 - 4) over Standard Bus; thereby establishing a live and active communications link between dissimilar networks.

- ∞- \	WATLOV	c V	RUI/G configurati Usi	atew on & ing Kl	ay & l Progr EPSer	Modbus amming verEX 4	[®] TCP Exam .0	ple
9. I	Provide a na	ame for the	e channel.					
	es Ki File	EPServerEx - [Edit View User P II View III	untitled.opf] (Dem rs Tools Help) 🏠 🖏 😭 🗠 👌	o Expires	01:58:41) × & @	, al		
	····· \$	Click to add a ch	hannel.	Tag Name		Address	Data Type	Scan Rate
		7			A channel na characters in Names can n quotations or <u>C</u> hannel name RUI/Gatewa	me can be from 1 t length. ot contain periods, start with an under start with an under w MBTCP	o 256 double score.)

10. In this example the device driver selected will be "Modbus Ethernet".

New Channel - Device Dri	ver	
	Select the device driver you want to assign to the channel. The drop-down list below contains the names of all the drivers that are installed on your system.	
	Device driver: Modbus Ethernet Mitsubishi CNC Ethernet Mitsubishi Ethernet Mitsubishi FX Mitsubishi FX Net Mitsubishi Serial Modbus Ascii Serial Modbus Ethernet	
	Modbus Plus Modbus Serial cel H	elp

< <u>B</u>ack

 $\underline{N}ext >$

Cancel

Help



11. Select the appropriate hardware (network adapter) used on the network.

New Channel - Network	Interface	
	This channel is configured to communicate over a network. You can select the network adapter that the driver should use from the list below. Select 'Default' if you want the operating system to choose the network adapter for you. <u>Network Adapter:</u> Default Intel(R) PR0/1000 [169.254.132.192]. Intel(R) PR0/Wire [10.3.15.86]	
	< Back Next > Cancel	Help

12. Next, select the appropriate write optimization method.

New Channel - Write Opt	imizations 🛛 🗙
	You can control how the server processes writes on this channel. Set the optimization method and write-to-read duty cycle below. Note: Writing only the latest value can affect batch processing or the equivalent. Optimization Method © Write all values for all tags © Write only latest value for <u>n</u> on-boolean tags © Write only latest value for <u>n</u> on-boolean tags © Write only latest value for all tags Duty Cycle Perform 10 • writes for every 1 read
	< <u>B</u> ack <u>N</u> ext > Cancel Help

13. The next selection allows for multiple masters on the network. When multiple masters exist on a network talking (reading & writing) to the same slaves, possible conflicts between masters can exist when performing a write operation.

New Channel - Socket U	sage	
	Socket Usage depends on the device to which you are connecting. When talking to a Modbus Ethernet device use Multiple Socket connections(default). When talking through a Modbus Ethernet to Modbus RTU gateway, use the Single Socket connection mode. Socket Usage	
	< <u>B</u> ack <u>N</u> ext > Cancel	Help

14. Click finish to complete this part of the configuration.

New Channel - Summary	
	If the following information is correct click 'Finish' to save the settings for the new channel.
	Name: RUI/Gateway MBTCP Device Driver: Modbus Ethernet Diagnostics: Disabled
	Network Adapter: Intel(R) PRO/1000 [169.254.132.192]
	Write Uptimization: Write only latest value for all tags 10 writes per read
	< <u>B</u> ack Finish Cancel Help

15. Once the channel configuration is complete it is now time to configure a device (RUI/Gateway).

KEPServerEx - [untitled.opf *]			
jle <u>E</u> dit <u>V</u> iew <u>U</u> sers <u>T</u> ools <u>H</u> elp			
) 🖻 📕 🛜 🏢 🖆 🗑 😭 🗤	🐰 🗈 🖻 🗙 😓	. 4 <u>1</u>	
RUI/Gateway MBTCP	Tag Name	Address	Data Type
Click to add a device.			
New Device - Name			
A device in lenge	vice name can be from 1 to 2 gth. es can not contain periods, do tions or start with an undersc e <u>name:</u> GTW <u>Next > Cancel</u>	56 characters puble ore. Help	

16. Select the Modbus[®] driver.

New Device - Model	The device you are defining uses a device driver that supports more than one model. The list below shows all supported models. Select a model that best describes the device you are defining. Device model:
	<pre>Modbus </pre> ✓ Back Next > Cancel Help



17. Recall that in steps 1-3 it was said that there are other configuration steps that need to be addressed that are not covered in this paper. As an example of those parameters that need to be set on the RUI/Gateway we see the IP address coming into focus. Enter the Modbus[®] TCP/IP address of the RUI/Gateway.

New Device - ID	The device you are defining may be multidropped as part of a network of devices. In order to communicate with the device, it must be assigned a unique ID. Your documentation for the device may refer to this as a "Network ID" or "Network Address."
<	Back Next > Cancel Help

18. Set timing according to your network requirements.

New Device - Timing	X
	The device you are defining has communications timing parameters that you can configure.
	Connect timeout:
and the second sec	<u>R</u> equest timeout: 1000 📑 milliseconds
	Eail after 3 successive timeouts
	Inter-request delay: 0 📑 milliseconds
	Z Back Nevt Cancel Holp



19. If communications fail between KEPServerEX and RUI/Gateway stop polling device.

New Device - Auto-De	Motion You can demote a device for a specific period upon communications failures. During this time no read request (writes if applicable) will be sent to the device. Demoting a failed device will prevent stalling communications with other devices on the channel.
	 Enable auto device demotion on communication failures Demote after 3 = successive failures Demote for 10000 = milliseconds Discard write requests during the demotion period
	< <u>B</u> ack <u>N</u> ext > Cancel Help

20. Generate unique input / output (I/O) tags for the RUI/Gateway.

New Device - Database	Creation The device you are defining has the ability to automatically generate a tag database. Determine if the device should create a database on startup, what action should be performed on previously generated tags, group to add tags to, and allowing subgroups. Startup: Do not generate on startup Action: Delete on create Add to group: Image: Add to group: Image: Allow automatically generated subgroups
	< <u>B</u> ack <u>N</u> ext > Cancel Help



21. Use the defaults for port number and IP protocol.

New Device - TCP/IP Image: Specify the TCP/IP port this device will be using. Valid ports for this device are 0 to 65535. The default port is 502. Image: The IP Protocol can be changed to UDP if your device supports it. Image: Port Number: Image: Port Port Port Port Port Port Port Port
< <u>B</u> ack <u>N</u> ext > Cancel Help

22. Use the defaults as shown.

New Device - Data Acc	ess Settings The driver can be configured with different settings for each device. Refer to the online help for assistance. Use zero based addressing Use zero based addressing Use holding register bit mask writes Use Modbus function 06 for single register writes Use Modbus function 05 for single coil writes Mailbox Settings Client Privileges:	
	< <u>B</u> ack <u>N</u> ext > Cancel <u>Help</u>)



23. The graphic below shows the default Modbus[®] word order which also represents the default Modbus[®] word order for the RUI/Gateway (Low/High).



24. Coil access is not used with the RUI/Gateway. The number of registers shown limits KEPServerEX in the maximum number of registers which can be read at a time.

New Device - Block	iizes	×
	Specify the maximum block sizes when reading data from this device. Refer to the online help for assistance. Coils (8-2000 in multiples of 8) Qutput: 32 ÷ Input: 32 ÷ Input: 32 ÷ Holding: 32 ÷ Holding: 32 ÷	
	< <u>B</u> ack <u>N</u> ext > Cancel Help	



25. KEPServerEX allows for imported tags via a text file.

New Device - Variable	Import Settings	×
	Set the location of the variable import file to be used in tag database creation. Select whether descriptions should be displayed if provided. Variable import file: ∱.txt Include descriptions?	
	< <u>B</u> ack <u>N</u> ext > Cancel Help	

26. Any tag returning an exception error will no longer be polled.





27. This concludes the device (RUI/Gateway) configuration.

New Device - Summary	\mathbf{X}
	If the following settings are correct click 'Finish' to begin using the new device. Name: RUI/GTW Model: Modbus ID: 169.254.1.11.0 Connect Timeout: 3 Sec. Request Timeout: 1000 ms Fail after 3 attempts Inter-Request Delay: 0 ms Auto-Demotion: Disabled Tag database startup: Do not generate on startup Tag database action: Delete on create
< <u>E</u>	ack Finish Cancel Help

28. Tag creation. In step 5 some prompts were shown indicating further explanation would follow, well, here we are.

The Gateway Instance and the Gateway Enable prompts must be set as shown in step 5 for this particular network. The Gateway Instance corresponds to the address given to the PM control and the Gateway Enable simply requires a "Yes" or "No" response.

When trying to read or write to any given member in a destination PM control it is important to keep in mind that there is a unique Modbus[®] address set aside for that member. As an example, note that as found in the EZ-ZONE[®] PM Communications user manual under the "Operations Page" Process Value 1 (PV1) is given a Modbus[®] address of 360 with a data type of floating point. As shown in the graphic in step two of this document there are four PM controls on the Standard Bus side of the network where each has the same address for PV1. As read through the RUI/Gateway, if it is desired to read PV1 of PM3 the Modbus[®] offset ($P_{O}F$) must be observed and used. So, in this particular case, the appropriate address to be read would be 410361 not 400361 where the offset as shown in step 5 for PM3 is 10000. Based on this network configuration, if it is desired to read PV1 from each of the four PM controls on the Standard Bus side of the network the following addresses would correlate to



each: PV1 of PM1 = 400361 (offset = 0) PV1 of PM2 = 405361 (offset = 5000) PV1 of PM3 = 410361 (offset = 10000) PV1 of PM4 = 415361 (offset = 15000)

29. Now that we know the finer details of the Modbus[®] offset prompts lets go back to KEPServerEX and look closer at the tag configuration and properties.

•	🕾 KEPServerEx - [C:\Program Files\	KEPServerEx\Projects\F	RUI-GTW MBTCP.opf]	
	<u> Eile E</u> dit <u>V</u> iew <u>U</u> sers <u>T</u> ools <u>H</u> elp			
	D 🗳 🔒 🕅 🖓 🛅 🛅 🚰 🗠	ä 🖻 🖹 🗙 🍰	ä.	
ſ	RUI/Gateway MBTCP	Tag Name	Address Data Type	Scan Rate Scaling
		Click to add a static tag.	. Tags are not required, but are	browsable by OPC clients.
			×	
	General Scaling			
	- Identification			
	Name: PV1			
			1 6 6 1	
	Addr <u>e</u> ss: 400361	? 🗸		
	Analog Input 1 PM1	/		
	Data properties			
	Data type: Float			
	Client access: Read O	nly		
	Scan rate: 100			
	0	K Cancel	Apply Help	

As can be seen above the "Tag Properties" dialogue box will open after clicking on the blue link identified as ("Click to add…"). The name and description are user defined where the Modbus[®] address will be specific as it relates to the member being read or written to.



30. To create similar tags for PV2 - PV4 simply click on the duplicate icon (circle) and change the fields accordingly (squares).

KEPServerEx - [C:\Program Fil	es\KEPServerEx\Projec	ts\RUI-GTW MB1	[CP.opf *]			
) 🖻 💾 🖄 🛄 🂭 💭 🖏 🖿	o 👗 🖻 🖻 🗙 👗	۵ 🐁				
RUI/Gateway MBTCP Tag Properties General Scaling Identification Name: PV1 of I Address 410362 Description: Analog	Tag Name PV1 of PM1 PV1 of PM2 PV1 of PM3 PV1 of PM4 PM4 PM4	Address 400361 405361 410362 2 2 2 2 2 2 2 2 2 2 2 2	Data Type Float Float Float Float	Scan Rate 100 100 100 100 100 100 100 100 100 10	Scaling None None None None	Description Analog Input 1 PM1 Analog Input 1 PM2 Analog Input 1 PM3 Analog Input 1 - PM3
Data properties Data <u>ty</u> <u>C</u> lient acce <u>S</u> can re	vpe: Float vess: Read Only vess: 100 millisecon] Inds				
	OK Ca	ancel Appl	y Help			

31. Once each of the Process Variables are configured and made available to KEPServerEX a similar screen as shown below should be displayed.

KEPServerEx - [C:\Program Files\KEPServerEx\Projects\RUI-GTW MBTCP.opf *]								
File Edit View Users Tools Help								
다 🎽 🖬 🔯 🛅 🖆 😂 🕼 🖎 🕹 🛍 📉 🙏 🌺 🍇								
🖃 🐶 RUI/Gateway MBTCP	Tag Name	Address	Data Type	Scan Rate	Scaling	Description		
📶 RUI/GTW	PV1 of PM1	400361	Float	100	None	Analog Input 1 PM1		
	PV1 of PM2	405361	Float	100	None	Analog Input 1 PM2		
	PV1 of PM3	410361	Float	100	None	Analog Input 1 PM3		
	€EPV1 of PM4	415361	Float	100	None	Analog Input 1 PM4		

32. The above examples represent tags for inputs where a similar procedure beginning at step 29 can be used to create output tags. In this case, tags were created for the Closed Loop Set Points (CLSP) for each control (PM1 - PM4). As was the case for the inputs (PV1), the new Modbus® register in focus (2160) can be found in the EZ-ZONE® PM Communications User Manual, starting at the "Operations Page" and then under the "Loop Menu". With this being Watlow 1241 Bundy Blvd Winona, MN 55987 Telephone: 507-494-5656 © 2008 Watlow Electric Mfg Co



said, look closely at the addresses given in defining the CLSP for each of the four PM controls.

KEPServerEx - [C: Program FilesKEPServerExProjects/RUI-GTW MBTCP.opf] (Demo Expires 01:40:41)								
<u>File Edit View Users Tools</u>	Help							
D 🗳 🖶 🛜 🌆 🎦 🔁 🕾 👳 🖧 🗛 🌡								
E RUI/Gateway MBTCP	Tag Name	Address	Data Type	Scan Rate	Scaling	Description		
RUI/GTW	⑦CLSP of PM1 ⑦CLSP of PM2 ⑦CLSP of PM3 ⑦CLSP of PM4	402161 407161 412161 417161	Float Float Float Float	100 100 100 100	None None None None	Closed Loop Set Point PM1 Closed Loop Set Point PM2 Closed Loop Set Point PM3 Closed Loop Set Point PM4		
	PV1 of PM1 PV1 of PM2 PV1 of PM3 PV1 of PM4	400361 405361 410361 415361	Float Float Float Float	100 100 100 100	None None None None	Analog Input 1 PM1 Analog Input 1 PM2 Analog Input 1 PM3 Analog Input 1 PM4		

33. In the screen shot above we now see a series of inputs and outputs that have been configured within KEPServerEX. To test the live and active connection using this software, simply click on the OPC quick client icon where the "Value" column shown below allows for active reading and writing to each of the PM controls on Standard Bus.

RUI/Gateway MBTCP	Tag Name	Address	Data Type	Scan Rate	Scaling	Description	
- 🛄 RUI/GTW	CLSP of PM1	402161	Float	100	None	Closed Loop Set Point -	PM1
a OPC Quick Client	- Untitled *						
<u>File Edit View T</u> ools	Help						
D 🖻 🔒 😹 💣 e	💣 😰 👗 🖻 🖻 🗙						
E :: KEPware.KEPServ	erEx.V4	Item ID			Data Type	Value	Timestamp
		RUI/Gatewa	RUI/Gateway MBTCP.RUI/GTW.CLSP of PM1			111	14:02:56:03
RUI/Gateway	MBTCPSystem	RUI/Gatewa	y MBTCP.RUI/GT	W.CLSP of PM2	Float	625	14:02:56:36
RUI/Gatewa	ay MBTCP.RUI/GTW	RUI/Gatewa	y MBTCP.RUI/GT	W.CLSP of PM3	Float	222	14:02:56:55
RUI/Gateway	MBTCP.RUI/GTWSystem	RUI/Gatewa	y MBTCP.RUI/GT	W.CLSP of PM4	Float	145	14:02:56:60
		RUI/Gatewa	y MBTCP.RUI/GT	W.PV1 of PM1	Float	82.0372	14:08:57:37
		RUI/Gatewa	y MBTCP.RUI/GT	W.PV1 of PM2	Float	84.035	14:08:57:48
		RUI/Gatewa	y MBTCP.RUI/GT	W.PV1 of PM3	Float	282.249	14:08:56:47
		RUI/Gatewa	v MBTCP.RUI/GT	W.PV1 of PM4	Float	76.7086	14:08:57:65

1241 Bundy Blvd Winona, MN 55987 Telephone: 507-494-5656 © 2008 Watlow Electric Mfg Co

Watlow



34. To better understand the following discussion and examples download and read the section entitled "User Programmable Memory Blocks" found in the EZ-ZONE[®] PM Communications user manual.

When using the RUI/Gateway equipped with Modbus[®] TCP or Modbus[®] RTU and while communicating with EZ-ZONE[®] *PM controls a block of 40 pointers or 80 words has been created to serve as the "Assembly Definition Addresses" and another group of 40 elements or 80 words has been defined as the "Assembly Working Addresses". The Assembly Definition Addresses are user configurable. Once configured with the Modbus[®] registers of choice, the corresponding Assembly Working Addresses assume that particular parameter as programmed, and will then reflect that parameters actual value. What this means then is that the user can configure a contiguous block of 40 elements or 80 words to any available parameter of their liking. It is recommended that when doing this configuration that the parameters data type be considered. It is much easier to set up a contiguous block of words of the same data type.

Note:

If the user sets any of the EZ-ZONE[®] PM controls back to factory defaults this assembly for that control will set to the factory defaults as well.

- * The EZ-ZONE[®] ST does not support programmable memory blocks. However, any ST parameter that is available over Modbus[®] can be accessed in a similar manner as was described in step 29.
- 35. In step 24 we defined the maximum number of words that can be read as 32. The maximum number of words Modbus[®] allows to be read at one time is 120 or 240 bytes, so all 80 words could be read and or written to if so desired. Due to this previous entry (step 24) in order to read the low order 40 words there were two read tags configured, 20 words each defining them as "Low order Assembly 1 & Low order assembly2". Likewise, the same was done for the upper 40 words where they are defined as "High order Assembly 1 & High order Assembly2". The screen shot below was duplicated 3 more times simply changing the names and addresses to create the tags mentioned above.

Tag Properties	
General Scaling	
Identification Name: 0- Modbus Low Assembly1 Address: 400041 [20] Description: Modbus Low Block Assembly1	
Data properties Data <u>type</u> : Word Client access: Read/Write Scan rate: 100 = milliseconds	
OK Cancel Apply	Help

- 36. In the screen shot that follows one can see the factory defaults for the Assembly Definition Addresses (block of 80 words) as they are being read through the RUI/Gateway. As explained in the EZ-ZONE[®] PM Communications user manual and above as well, the enumerated values shown in each of these Modbus[®] registers represents the actual Modbus[®] registers for each of the 80 corresponding Assembly Working Addresses. To find what these Modbus[®] registers actually represent (as in which parameter is actually defined), check out the Operations & Setup pages of the EZ-ZONE[®] PM Communications user manual.
- 37. Registers 80 & 81 (circled below) are shown as "Analog Input 1 Process Value" represented by the enumerated values of 360 and 361 respectively. If reading the associated Assembly Working Address registers 240 & 241, one would find the current Analog Input 1 Process Value.

WATLOV



🕷 OPC Quick Client - Untitled *	
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp	
D 🖻 🔒 💰 📽 💣 🗳 🗎 k 🖻 🖥 🗙	1st Word of 80
Item ID	Value
RUI/Gateway MBTCP.RUI/GTW.0- Modbus Low Assembly1	[1880, 1881, 2160, 2161, 2162, 2163, 1480, 1481, 1482, 1483, 1530, 1531, 1532, 1533, 1580, 1581, 1582, 1583, 1630, 1631]
RUI/Gateway MBTCP.RUI/GTW.0- Modbus Low Assembly2	[1632, 1633, 2540, 2541, 2520, 2521, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1900, 1901, 1902, 1903, 1898, 1899]
RUI/Gateway MBTCP.RUI/GTW.1- Modbus High Assembly1	(360, 361) 362, 363, 440, 441, 442, 443, 1496, 1497, 1546, 1547, 1596, 1597, 1646, 1647, 1328, 1329, 1348, 1349]
RUI/Gateway MBTCP.RUI/GTW.1- Modbus High Assembly2	[1882, 1883, 1904, 1905, 1906, 1907, 690, 691, 2520, 2521, 2540, 2541, 2524, 2525, 2526, 2527, 2528, 2529, 2536, 2537]
RUI/Gateway MBTCP.RUI/GTW.CLSP of PM1	75
RUI/Gateway MBTCP.RUI/GTW.CLSP of PM2	75
RUI/Gateway MBTCP.RUI/GTW.CLSP of PM3	222
CRUI/Gateway MBTCP.RUI/GTW.CLSP of PM4	777 80th Word of 80
CRUI/Gateway MBTCP.RUI/GTW.PV1 of PM1	80.9274
CRUI/Gateway MBTCP.RUI/GTW.PV1 of PM2	79.6534
RUI/Gateway MBTCP.RUI/GTW.PV1 of PM3	282.304
RUI/Gateway MBTCP.RUI/GTW.PV1 of PM4	76.8568

38. Changing an element in the assembly is EZ. A new tag was created as shown below. Notice the address identified as well as the data type.

ag Properties		
General Scaling		
Identification <u>N</u> ame:	New Assembly - Pointer 12	
Addr <u>e</u> ss:	400063	
<u>D</u> escription:	Idle Set Point	
Data properties		
	Data type: DWord	
	Scan rate: 1100 + will set	
	Scarrate. 1700 - Milliseconds	
	OK Cancel Apply	Help
Blvd		



39. The address shown above represents pointer 12 as shown in the EZ-ZONE[®] PM Communications user manual under the sub-heading of "User Programmable Memory Blocks".

Again, focus on the address below. This particular address represents the Assembly Working Address for pointer 12.

Tag Properties	
General Scaling	
Identification Name: Idle Set Point Address: 400223 Description: Idle Set Point - PM1	
Data type: Float Client access: Read/Write Scan rate: 100 milliseconds	
OK Cancel Apply	Help

40. Now that the tags are created execute the OPC quick client as illustrated in step 33. Once running, click on the tag created to modify the assembly. In this case, "New Assembly - Pointer 12". Based on the "Description" field in the screen shot in step 38 and 39 pointer 12 will become the Idle Set Point of PM1 once changed. The value to be written below reflects this.





42. Lastly, in the screen shot below, notice that the 12th pointer has indeed been changed to Idle Set Point (circle) and the tag created to reflect this (arrow) shows the current Idle Set Point for PM1. Compare this to the default assembly found in step 37 above.

🖕 OPC Quick Client - Untitled * 📃 🗗					
<u>File E</u> d	t <u>V</u> iew <u>T</u> ools <u>H</u> elp				
0 🖻) 🖻 🖬 📸 💣 💕 🕼 🖻 🗮 🗙				
⊡-:; _ i k	Item ID	Value			
	RUI/Gateway MBTCP.RUI/GTW.0- Modbus Low Assembly1	[1880, 1881, 21 <u>60, 21</u> 61, 2162, 2163, 1480, 1481, 1482, 1483, 1530, 1531, 1532, 1533, 1580, 1581, 1582, 1583, 1630, 1631]			
	RUI/Gateway MBTCP.RUI/GTW.0- Modbus Low Assembly2	[1632, 1633 2176, 2177 2520, 2521, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1900, 1901, 1902, 1903, 1898, 1899]			
	CRUI/Gateway MBTCP.RUI/GTW.1- Modbus High Assembly1	[360, 361, 362, 363, 440, 441, 442, 443, 1496, 1497, 1546, 1547, 1596, 1597, 1646, 1647, 1328, 1329, 1348, 1349]			
·····	RUI/Gateway MBTCP.RUI/GTW.1- Modbus High Assembly2	[1882, 1883, 1904, 1905, 1906, 1907, 690, 691, 2520, 2521, 2540, 2541, 2524, 2525, 2526, 2527, 2528, 2529, 2536, 2537]			
	RUI/Gateway MBTCP.RUI/GTW.CLSP of PM1	75			
	RUI/Gateway MBTCP.RUI/GTW.CLSP of PM2	75			
	RUI/Gateway MBTCP.RUI/GTW.CLSP of PM3	222			
	RUI/Gateway MBTCP.RUI/GTW.CLSP of PM4	455			
	RUI/Gateway MBTCP.RUI/GTW.Idle Set Point	355 🥌			
	CRUI/Gateway MBTCP.RUI/GTW.New Assembly - Pointer 12	142674048			
	RUI/Gateway MBTCP.RUI/GTW.PV1 of PM1	81.2463			
	RUI/Gateway MBTCP.RUI/GTW.PV1 of PM2	78.4731			
	RUI/Gateway MBTCP.RUI/GTW.PV1 of PM3	282.304			
	RUI/Gateway MBTCP.RUI/GTW.PV1 of PM4	76.0314			